

## ABSTRACT

An isolated, water-soluble polypeptide derived from tryptophanyl-tRNA synthetase is useful for the inhibition of angiogenesis. The polypeptide consists essentially of the amino acid residue sequence

5 SAKGIDYDKL IVRFGSSKID KELINRIERA TGQRPHHFLR RGIFFSHRDM  
NQVLDAYENK KPFYLYTGRG PSSEAMHVGH LIPFIFTKWL QDVFNVPLVI  
QMTDDEKYLW KDLTLDQAYG DAVENAKDII ACGFDINKTF IFSDLDYMG  
SSGFYKNVVK IQKHVTFNQV KGIFGFTDSD CIGKISFPPI QAAPSFSNSF  
PQIFRDRTDI QCLIPCAIDQ DPYFRMTRDV APRIGYPKPA LLHSTFFPAL  
10 QGAQTKMSAS DPNSSIFLTD TAKQIKTKVN KHAFSGGRDT IEEHRQFGGN  
CDVDVSFMYL TFFLEDDDKL EQIRKDYTSG AMLTGELKKA LIEVLQPLIA  
EHQARRKEVT DEIVKEFMTP RKLSFDFQ (SEQ ID NO: 12)

or an angiogenesis inhibiting fragment thereof. The isolated polypeptide has a size of no more than about 45 kilodaltons. Methods of use of the polypeptide are  
15 also provided.